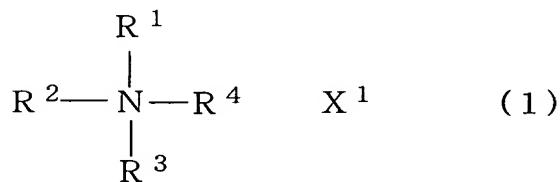


CLAIMS

1. An electrolytic solution for use in nonaqueous electrolytic lithium secondary cells which contains a room temperature molten salt, i.e., an aliphatic quaternary ammonium salt of the formula (1), an organic solvent and a lithium salt of the formula (2), the electrolytic solution being characterized in that the organic solvent contains vinylene carbonate in an amount of 1 to 5 wt. % based on the electrolytic solution



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wherein R^1 to R^3 are each a chain hydrocarbon having 1 to 4 carbon atoms, R^4 is methoxymethyl, ethoxymethyl, propoxymethyl or isopropoxymethyl, and X^1 and X^2 are each a fluorine-containing anion.

15 2. An electrolytic solution according to claim 1 wherein at least one of the fluorine-containing anions X^1 and X^2 contains tetrafluoroborate.

3. An electrolytic solution according to any one of claims 1 and 2 wherein the room temperature molten salt is contained in an amount of 1 to 15 wt. % based on the electrolytic solution.

4. An electrolytic solution according to any one of

claims 1 and 2 wherein the room temperature molten salt is contained in an amount of 4 to 13 wt. % based on the electrolytic solution.

5. An electrolytic solution according to any one of claims 1 and 2 wherein the room temperature molten salt is contained in an amount of 4 to 9 wt. % based on the electrolytic solution.

6. A nonaqueous electrolytic lithium secondary cell comprising a positive electrode, a negative electrode, a separator and a nonaqueous electrolytic solution, the secondary cell being characterized in that the electrolytic 5 solution according to claim 1 is used as the nonaqueous electrolytic solution.

7. A secondary cell according to claim 6 wherein the electrolytic solution according to claim 2 is used as the electrolytic solution.

8. A secondary cell according to claim 6 wherein the electrolytic solution according to any one of claims 3 to 5 is used as the electrolytic solution.

9. A secondary cell according to any one of claims 6 to 8 which is characterized in that negative electrode is a carbon material which absorbs and desorbs lithium ions.